

Amendments to the Claims

1. (Original) A modified pro- α chain comprising a triple helical forming domain linked to at least one N-terminal domain characterised in that the N-terminal domain contains a polypeptide sequence from at least part of a laminin glycoprotein or at least part of a secretory leukocyte protease inhibitor or functional derivatives thereof.

2. (Original) A modified pro- α chain as claimed in claim 1 wherein the triple helical forming domain is from a fibrillar forming pro- α chain.

3. (Original) A modified pro- α chain as claimed in claim 2 wherein the triple helical forming domain is from a type I, II, III, V or XI pro- α chain.

4. (Original) A modified pro- α chain as claimed in claim 3 wherein the triple helical forming domain is from a pro- α (III) chain.

5. (Currently Amended) A modified pro- α chain as claimed in ~~any one of claims~~ claim 1 to 4 wherein the N- terminal domain comprises a part of a laminin molecule.

6. (Original) A modified pro- α chain as claimed in claim 5 wherein the N-terminal domain is derived from the globular domains of an α -chain of a laminin molecule.

7. (Original) A modified pro- α chain as claimed in claim 6 wherein the N-terminal domain comprises the amino acid sequence for at least the G3 globular domain of the α -chain.

8. (Original) A modified pro- α chain as claimed in claim 6 wherein the N-terminal comprises the amino acid sequence for the G1 to G3 domains.

9. (Currently Amended) A modified pro- α chain as claimed in ~~any one of claims~~ claim 5 to 8 wherein N- terminal sequence of the pro- α chain is replaced with at least part of the amino acid sequence of the globular chain of Laminin-5.

10. (Currently Amended) A modified pro- α chain as claimed in ~~any one of the preceding claims~~ claim 1 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

11. (Original) A modified pro- α chain as claimed in claim 1 wherein the entire sequence of secretory leukocyte protease inhibitor is attached to the N-terminal domain.

12. (Currently Amended) A modified pro- α chain as claimed in ~~any one of claims claim 1 to 11~~ claim 1 wherein a N- proteinase cleavage site associated with the N-terminal propeptide domain is modified such as to alter the domain's susceptibility to cleavage.

13. (Original) A modified pro- α chain as claimed in claim 12 wherein the N-proteinase cleavage site is modified such that the domain may not be cleaved.

14. (Original) A modified pro- α chain as claimed in claim 13 wherein a region between the helical forming domain and the N-propeptide forming domain of the pro- α chain is modified to confer resistance to N-proteinases.

15. (Original) A modified pro- α chain as claimed in claim 14 wherein Pro-Gln in the region is altered to Leu-Pro.

16. (Original) A modified pro- α chain as claimed in claim 8 wherein the N-terminal domain contains the amino acids of SEQ ID NO:10.

17. (Original) A modified pro- α chain as claimed in claim 7 wherein the N-terminal domain contains the amino acids of SEQ ID NO:14.

18. (Original) A modified pro- α chain as claimed in claim 11 wherein the N-terminal domain contains the amino acids of SEQ ID NO:27.

19. (Currently Amended) A DNA molecule encoding modified pro- α chains as defined by ~~any one of claims 1 to 18~~ claim 1.

20. (Original) A DNA molecule encoding modified pro- α chains as claimed in claim 19 characterised in that the molecule includes the bases of SEQ ID NO:9.

21. (Original) A DNA molecule encoding modified pro- α chains as claimed in claim 19 characterised in that the molecule includes the bases of SEQ ID NO:13.

22. (Original) A DNA molecule encoding modified pro- α chains as claimed in claim 19 characterised in that the molecule includes the bases of SEQ ID NO:26.

23. (Currently Amended) A procollagen molecule comprising a trimer of pro- α chains characterised in that at least one of the pro- α chains is a modified pro- α chain as defined by ~~any one of claims 1 to 18~~ claim 1.

24. (Original) A procollagen molecule as claimed in claim 23 wherein the C-terminal domain of the molecule is removed.

25. (Original) A collagen polymer comprising collagen monomers wherein at least some of the collagen monomers contained therein have retained N-propeptides characterised in that at least some of the retained N-propeptides contain a polypeptide sequence from at least part of a laminin glycoprotein or at least part of a secretory leukocyte protease inhibitor or functional derivatives thereof.

26. (Currently Amended) A collagen polymer as claimed in claim 25 wherein the collagen monomers having retained propeptide domains are derived from procollagen molecules as defined by claim 23 ~~or claim 24~~.

27. (Currently Amended) A collagen matrix comprising collagen monomers having modified propeptide domains derived from procollagen molecules as defined by claim 23 ~~and claim 24~~.

28. (Currently Amended) A dressing comprising collagen polymers as defined by claim 26 ~~or a collagen matrix as defined by claim 27~~.

29. (Currently Amended) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to ~~any one of the preceding claims~~ claim 1 for the treatment of medical conditions.

30. (Currently Amended) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to ~~any one of claims 1 to 28~~ claim 1 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

31. (Currently Amended) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to ~~any one of claims 1 to 28~~ claim 1.

32. (Original) An artificial skin/tissue comprising a collagen matrix according to claim 27.

33. (Original) A body implant comprising a collagen matrix according to claim 27.

34. (Currently Amended) The use of a collagen matrix, artificial skin/tissue or a body implant according to claim 27, ~~claim 32 or claim 33~~ for the treatment of medical conditions.

35. (Currently Amended) A delivery system for use in gene therapy technique, said delivery system comprising a DNA molecule according to ~~any one of claims 19 to 22~~ claim 19 which is capable or being transcribed to lead the expression of the modified pro- α chain at a wound site or site of fibrosis.

36. (Original) The use of a delivery system as defined in claim 35 in the manufacture of a medicament for treating wounds or fibrotic disorders.

37. (Original) A method of treating a wound or fibrotic condition comprising administering to a patient in need of treatment a therapeutic dose of a delivery system as defined in claim 35.

38. (New) A modified pro- α chain as claimed in claim 2 wherein the N-terminal domain comprises a part of a laminin molecule.

39. (New) A modified pro- α chain as claimed in claim 3 wherein the N-terminal domain comprises a part of a laminin molecule.

40. (New) A modified pro- α chain as claimed in claim 4 wherein the N-terminal domain comprises a part of a laminin molecule.

41. (New) A modified pro- α chain as claimed in claim 6 wherein N- terminal sequence of the pro- α chain is replaced with at least part of the amino acid sequence of the globular chain of Laminin-5.

42. (New) A modified pro- α chain as claimed in claim 7 wherein N- terminal sequence of the pro- α chain is replaced with at least part of the amino acid sequence of the globular chain of Laminin-5.

43. (New) A modified pro- α chain as claimed in claim 8 wherein N- terminal sequence of the pro- α chain is replaced with at least part of the amino acid sequence of the globular chain of Laminin-5.

44. (New) A modified pro- α chain as claimed in claim 4 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

45. (New) A modified pro- α chain as claimed in claim 5 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

46. (New) A modified pro- α chain as claimed in claim 7 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

47. (New) A modified pro- α chain as claimed in claim 38 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

48. (New) modified pro- α chain as claimed in claim 39 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

49. (New) modified pro- α chain as claimed in claim 40 wherein the procollagen N-propeptide sequence is replaced prior to N100 with the sequence for the laminin glycoprotein.

50. (New) A modified pro- α chain as claimed in claim 4 wherein a N-proteinase cleavage site associated with the N-terminal propeptide domain is modified such as to alter the domain's susceptibility to cleavage.

51. (New) A modified pro- α chain as claimed in claim 40 wherein a N-proteinase cleavage site associated with the N-terminal propeptide domain is modified such as to alter the domain's susceptibility to cleavage.

52. (New) A modified pro- α chain as claimed in claim 42 wherein a N-proteinase cleavage site associated with the N-terminal propeptide domain is modified such as to alter the domain's susceptibility to cleavage.

53. (New) A modified pro- α chain as claimed in claim 10 wherein a N-proteinase cleavage site associated with the N-terminal propeptide domain is modified such as to alter the domain's susceptibility to cleavage.

54. (New) A modified pro- α chain as claimed in claim 11 wherein a N-proteinase cleavage site associated with the N-terminal propeptide domain is modified such as to alter the domain's susceptibility to cleavage.

55. (New) A DNA molecule encoding modified pro- α chains as defined by claim 4.

56. (New) A DNA molecule encoding modified pro- α chains as defined by claim 42.

57. (New) A DNA molecule encoding modified pro- α chains as defined by claim 15.

58. (New) A DNA molecule encoding modified pro- α chains wherein the N-terminal domain contains the amino acids of one of SEQ ID NO:10, SEQ ID NO:14, SEQ ID NO:27.

59. (New) A procollagen molecule comprising a trimer of pro- α chains characterised in that at least one of the pro- α chains is a modified pro- α chain as defined by claim 4.

60. (New) A procollagen molecule comprising a trimer of pro- α chains characterised in that at least one of the pro- α chains is a modified pro- α chain as defined by claim 42.

61. (New) A procollagen molecule comprising a trimer of pro- α chains characterised in that at least one of the pro- α chains is a modified pro- α chain as defined by

claim 15.

62. (New) A procollagen molecule comprising a trimer of pro- α chains characterised in that at least one of the pro- α chains is a modified pro- α chain as defined by claim 58.

63. (New) A procollagen molecule comprising a trimer of pro- α chains wherein the molecule includes one of the bases of SEQ ID NO:9, SEQ ID NO:13, SEQ ID NO:26.

64. (New) A collagen polymer as claimed in claim 25 wherein the collagen monomers having retained propeptide domains are derived from procollagen molecules as defined by claim 24.

65. (New) A collagen matrix comprising collagen monomers having modified propeptide domains derived from procollagen molecules as defined by claim 24.

66. (New) A dressing comprising a collagen matrix as defined by claim 27.

67. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 4 for the treatment of medical conditions.

68. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 42 for the treatment of medical conditions.

69. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 15 for the treatment of medical conditions.

70. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 58 for the treatment of medical conditions.

71. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 63 for the treatment of medical conditions.

72. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 64 for the treatment of medical conditions.

73. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 65 for the treatment of medical conditions.

74. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 66 for the treatment of medical conditions.

75. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 26 for the treatment of medical conditions.

76. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 27 for the treatment of medical conditions.

77. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 28 for the treatment of medical conditions.

78. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 4 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

79. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 42 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

80. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 15 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

81. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 58 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

82. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 26 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

83. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 27 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

84. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 28 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

85. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 63 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

86. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 64 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

87. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 65 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

88. (New) The use of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 66 for the manufacture of a medicament for use in the treatment of wounds or fibrotic disorders.

89. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 4.

90. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 42.

91. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 15.

92. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 58.

93. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 26.

94. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 27.

95. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 28.

96. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 63.

97. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 64.

98. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 65.

99. (New) A method of treating a wound or fibrotic disorder comprising administering to a subject in need of such treatment a therapeutically effective amount of a modified pro- α chain, procollagen molecule, polymer, matrix or dressing according to claim 66.

100. (New) A delivery system for use in gene therapy technique, said delivery system comprising a DNA molecule according to claim 20 which is capable of being transcribed to lead the expression of the modified pro- α chain at a wound site or site of fibrosis.

101. (New) A delivery system for use in gene therapy technique, said delivery system comprising a DNA molecule according to claim 21 which is capable or being transcribed to lead the expression of the modified pro- α chain at a wound site or site of fibrosis.

102. (New) A delivery system for use in gene therapy technique, said delivery system comprising a DNA molecule according to claim 22 which is capable or being transcribed to lead the expression of the modified pro- α chain at a wound site or site of fibrosis.

103. (New) The use of a collagen matrix, artificial skin/tissue or a body implant according to claim 32, for the treatment of medical conditions.

104. (New) The use of a collagen matrix, artificial skin/tissue or a body implant according to claim 33, for the treatment of medical conditions.